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AUTHOR Boudewyns, Patrick A.
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AVAILABLE FROM Patrick A. Boudewyns, Research Service, Veterans Administration Hospital, Iowa City, Iowa 52240
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ABSTRACT

Two inpatients, one with a circumscribed phobia for dentists and dental offices and another who had been diagnosed as suffering from an anxiety neurosis, were treated with a flooding procedure. A simple flooding technique which dealt with only the symptom contingent cues was sufficient to change behavior in the former case, but for the relatively complex anxiety neurosis the more structured flooding technique, Implosive Therapy, was used. The case studies were considered demonstrative of the process of flooding as it applies to both a situation-specific and a non-situation-specific anxiety state. Some theoretical and semantic issues relative to therapy process were discussed. (Author)

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FLOODING AND IMPLOSIVE THERAPY WITH SITUATION SPECIFIC AND NON-SITUATION SPECIFIC ANXIETY¹

Patrick A. Boudewyns

Iowa City Veterans Administration Hospital

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Wilson and Smith (1968) provide evidence to support their claim that some critics consider behavior therapy ineffective in dealing with anxiety not under specifiable stimulus control (e.g. free floating anxiety). In the same paper these authors presented a new behavior therapy, Counter Conditioning Therapy Using Free Association, which may not be subject to this criticism. Flooding is another technique which may have a wider range of applicability than other learning-theory based therapies. In fact, Boulougouris et al (1971), in a study comparing the effects of systematic desensitization (SD) with flooding on a sample of clinical phobias, reported that flooding was more effective than SD with patients with non-specific fears than with patients who suffered from more stimulus bound phobias. Similarly, a number of other recent experimental investigations on clinical samples lend support to the notion that flooding (Hussain, 1971) and the more structured flooding technique, Implosive Therapy (Hogan, 1966; Levis and Carrera, 1967; Boudewyns and Wilson, 1972) is an effective therapy procedure for a wide range of clinical disorders.²

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The construct or process of extinction can be used to explain the effects of flooding. The behavior therapist who uses flooding generally views neurotic and psychotic defensive behaviors as

efforts by the individual to avoid objectively non-threatening stimuli which have, through conditioning, come to elicit anxiety. Successful avoidance preserves the conditioning and disallows the extinction of the conditioned emotional response to these stimuli, even though they may no longer be associated with noxious consequences (primary reinforcement). Flooding is an attempt to induce the patient to reduce (extinguish) his fear by presenting the fear cues to him, in imagination, under demand conditions that make it difficult for him to avoid his anxiety. On the human level the situation can be complex, since stimuli may be either "exteroceptive" (e.g. a phobic object) or "interoceptive" (e.g. response produced stimuli such as tendencies to act out sexually or aggressively). (Stampfl and Levis, 1967).

Especially in the non-situation specific anxiety states, the significant cues seem obfuscated by the retroactive effects of stimuli experienced more recently in the life of the individual, may still be influencing current emotional behavior, even though that person may not be aware of the nature of the stimuli. The dynamic concept of repression seems to fit these assumptions. In learning theory terms the notion of chaining, a concept based on the Pavlovian construct of higher order conditioning, may explain the same phenomenon. Thus, chaining may account for the hypothesis that fear-producing cues or stimuli experienced early in the life of the organism affect adult behavior. Stampfl and Levis formulated the concept of an avoidance serial cue hierarchy (ASCH) in which "conscious" symptom contingent cues are associated through conditioning to

"unconscious" hypothesized cues. These associations are preserved by the avoidance behavior (repression?) of the patient. The most efficient extinction procedure would require repeated presentations of both the symptom contingent cues and the earlier hypothesized cues to the patient. But how are the hypothesized cues determined since presumably the patient is unaware of them? Stampfl uses dynamic theory to help identify and develop hypotheses about potential cues high up on the ASCH. The patient's response to the imagined scenes helps determine the appropriateness of these hypotheses. Further, Stampfl and Levis suggest ten potential areas of intrapersonal conflict that might be used as a guide to help determine the content of therapy: aggression, punishment, oral material, anal material, sexual material, rejection, bodily injury, loss of control, acceptance of conscience, and ANS and CNS reactivity. The implosive therapist routinely investigates each area by presentation of a relevant imagined scene to the patient. The patient's emotional response is the feedback used to determine the appropriateness of the area.

The purpose of this paper is to describe and contrast the process of flooding as it was used in two clinical cases: a circumscribed situation specific phobia and a non-situation specific anxiety neurosis. The former instance is an example of simple flooding where the presentation of the symptom contingent ~~use~~ ^{cue} alone was sufficient to change behavior. The latter case demonstrates the use of Stampfl's Implosive Therapy (IT) in which the presentation of both symptom contingent and hypothesized cues were used.

Cases

In the present study the assessment procedure suggested by Stampfl was used in both cases. In the first two sessions a standard clinical interview was used to gather material for therapy. At the end of each of these interviews the patient was asked to close his eyes and visualize "neutral" scenes. At first these scenes were familiar to the patient and common to his experience; e.g., the front of his home, his wife's face. Later they were unfamiliar, unusual scenes; e.g., floating on a cloud. The purpose of these early scenes was to determine the extent and quality of the patient's visual imagery and to establish the therapist as the director of the scenes.

During therapy itself each patient was instructed to close his eyes and to have a vivid day-dream as directed by the therapist. Both patients were strongly encouraged to "get into" the scenes and to try to feel as if they were going through the experience in reality. They were also encouraged to imagine using modalities other than visual imagery; i.e. they were asked to imagine feeling, hearing, smelling, or even tasting cues presented to them. Theoretically the more conditioned stimuli used, the greater the probability of extinction of the emotional response.

During early sessions, the therapist presented the entire theme; but as soon as the patient became familiar with the procedure he was encouraged to take a more active role in therapy by embellishing the themes with his own associations (names, places, etc.) and by doing "home work" (reviewing the scenes on his own in between sessions). A vivid, graphic style was used in the presentation of the material

in order to raise and maintain high levels of anxiety. If the patient gave any indication that his emotional response to a particular theme was diminishing (extinguishing), new material was presented immediately.

Case 1; Simple Flooding

Mr. N., a 25 year old unmarried welder, entered the hospital voluntarily with symptoms of depression and anxiety, a history of criminal behavior, and a spotty work record. Since he was obviously lacking in important social, technical and academic skills, the recommended therapy program consisted primarily of supportive therapy, remedial reading lessons, and further technical training in his trade.

After Mr. N. entered our program, however, the author discovered that he had a circumscribed phobia for dentists and dental offices. He complained that even though his teeth were in a severe state of decay, his fears had made him unable to consult a dentist since he was a child. Further, if he even attempted to enter a dental office he would become sick to his stomach, gag, and sometimes vomit. It seemed obvious that such avoidance behavior kept this patient's conditioned emotional response to dentists from extinguishing. The phobia seemed to stem from a frightening childhood experience (age seven) when Mr. N. had a tooth pulled by what he described as "a mean and ugly dentist." He seemed highly motivated to overcome his fears, and after a short explanation of the flooding procedure, agreed to try the therapy. Not counting the initial clinical interviews, therapy included three 45-minute sessions each spaced one day apart. All three sessions consisted of two basic themes. In the

first, the patient was asked to imagine a visit to the dental service of the hospital to have a tooth pulled. The second consisted of a scene in which he imagined, in complete detail, the original traumatic dental visit. This included a detailed account of the trip to the office, the actual visit and his behavior after the visit. Mr. N. manifested his disturbance to both scenes by profuse sweating, crying and gagging. At one point he vomited. At the end of the first session the patient was assigned the homework task of reviewing both scenes on his own. By the third and final office session the patient was able to review the scenes with a considerable reduction in emotionality.

To test the effects of therapy the patient was instructed to go to the hospital's dental service, sit in the outer office and observe his response. He was able to do this with only mild discomfort. About a week later Mr. N. successfully endured his first visit to the dentist in 18 years and was able to make numerous return visits for dental work.

Case 2; Implosive Therapy

Mr. R., a 30 year old, married, foreman for an aluminum window manufacturer, was admitted with complaints of "nervousness," generalized uncontrolled tremors (more pronounced in his fingers and hands), and a history of seizure-like episodes. A neurologist concluded that his symptoms were probably psychogenic and functional. Drugs had no significant effect. Since his wife was about to have their first child, the family's financial situation was also going to become a source of anxiety for him, if he were unable to return to

work shortly. Short-term therapy, aimed at quick symptom relief seemed in order.

In the pre-therapy interview the patient reported that his symptoms had been pronounced for the past three or four years though he had felt anxious and inadequate since graduation from high school. His symptoms were particularly a problem in recent months. Exacerbation of the symptoms coincided with the onset of his wife's first pregnancy. He described his early childhood as pleasant up until the age of 12, when his family bought a small farm. Here he was given "too many responsibilities." When he was unable to perform his chores adequately, his father, who drank heavily, would punish him physically. No specific stimulus seemed associated with the symptoms but considering the patient's history it was not surprising that he disliked being put in any position of responsibility. He was also disturbed when he would see or even read about any form of violence. His immediate concerns were the embarrassment he felt when his hands "shook so much that others could see," and the fear that he might "black out" at an unfortunate time (e.g. while driving).

Not including the two initial interview sessions, therapy consisted of twelve 45-minute sessions over a period of three and a half weeks. During this time it was suggested to the patient that he make no efforts to control his tremors. In fact, he was instructed to try to "shake more" whenever he felt an episode coming on. Though skeptical at first, the patient seemed amazed to find that this procedure actually increased self-control over his instrumental behavior in anxiety provoking situations. Although this suggestion is

consistent with the theory which underlies IT, the reader may notice similarity to Frankel's ~~mention of~~ paradoxical intention (Frankel, 1960; Lazarus, 1971, p. 232).

Early themes utilized scenes in which the patient was embarrassed by his shaking and made a victim of his felt inadequacy (symptom contingent cues). Later themes were based on his past life and emphasized aggression, counter-aggression, punishment, parental rejection, and failure in positions of responsibility (hypothesized cues).

Unlike Mr. N., this patient did not display a great deal of affect during therapy sessions. An increase in his anxiety was indicated by greater postural rigidity. In this case the patient's effort at rigid control may simply have been a means he had used in the past to keep from shaking. As in the case of Mr. N. each scene, described below, was repeated within each session and reviewed during the next session(s) until there was a reduction in the patient's emotional response to that scene.

Session I. During the initial interview session Mr. R. was asked to describe what situations were relatively more anxiety provoking for him. One situation which he described involved his car pool. He was especially anxious when it was his turn to drive. This fact was consistent with the patient's fear of failure and punishment when he was put in positions of responsibility. Thus, his fear that he would have an accident while driving and be responsible for the other people's injuries, or possible death, was of great concern to him.

While actually driving he would avoid his fears by ^{driving} moving slowly and

attending to the external stimuli of the road and environment around him. The imagined scene consisted of an accident in which all the members of the car pool, except the patient, were killed in a gory, bloody two-car accident. He was then punished by the law and rejected by his family and friends. Punishment consisted of another fear, the fear of rejection and loneliness. The theme concluded with the patient in solitary confinement where no one even recognized his existence. He died, painfully, in his cell, a lonely man. The scene ended here since the patient did not have strong religious convictions about an after-life. If he had, it would have been appropriate to continue imagined punishment in the hereafter.

Session 2. This scene stressed cues similar to those in Scene 1 but involved situations in which the patient was put into positions of responsibility while in the military service. At one point during his service career, Mr. R. had been a prison guard. That situation made him extremely anxious for two reasons; ⁽¹⁾~~one~~, he feared that he would not be able to meet his responsibility and the prisoners would escape, and ⁽²⁾~~two~~, he was concerned about his own response should the prisoners try to escape. He doubted that he would be able to shoot at them if they were to make an attempt. It was hypothesized that this fear of violence was probably originally based on the punishment he would receive from his father when he did make an aggressive response towards him; and the fear that if he did start to engage in violent activities that he would lose control of himself and end up being rejected and punished for his behavior.

Thus, the scene stressed these very fears, by having him imagine the prisoners escaping, him being punished for his irresponsibility, and his counteraggression aimed at the authority that punished him. His violent reactions were then met by further violence on the part of authorities and again he ended up being rejected and punished. This time he was asked to imagine being sentenced to die in a gas chamber by a punitive judge who looked like his father. Relevant here is the fact that Mr. R. was quite prejudiced against policemen and other law enforcement officials. These negative feelings were easily tapped with this scene.

Session 3. This scene was derived from Mr. R's hostility towards his boss. He claimed that his boss demanded too much of him and gave him too much responsibility without sufficient remuneration. The scene centered around an argument between the patient and his boss which led to Mr. R. being fired. At this point the patient was asked to imagine becoming hostile and starting a fist fight which ended with him clubbing his boss to death. This scene concluded with the patient being charged with assault and again sentenced, rejected, and put to death in the gas chamber.

Session 4. This scene centered around another symptom contingent cue, i.e. his embarrassment over shaking when other people made demands on him. Mr. R. claimed that his hands would shake most when he would reach out to accept an item offered to him by another person. Consequently, if at all possible, he would avoid such interactions. This theme encompassed a number of embarrassing situations in which the patient would shake so much that he would spill or drop things

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on others. He would then be ridiculed for this behavior. Hostility towards authority figures was emphasized in this scene as well.

Session 5. This session depicted two scenes involving hostile, angry responses towards familiar authority figures and reviewed some of the same cues presented in Scenes 1, 2 and 3. By this time most of the symptom contingent cues had been covered in some detail. The patient had been cooperative and had done his homework. Perhaps for these reasons there had already been considerable reduction in symptoms.

Session 6. In this scene earlier hypothesized cues were presented. The scene centered around an hypothesized argument with his father, concerning farm responsibilities, when Mr. R. was 12 years old. His father was pictured as drunk and abusive and Mr. R returned the hostility. This resulted in the patient being ostracized by his mother and the rest of the family for his aggression. He was punished severely by his father and rejected by the rest of the family. The patient's conditioned emotional response to this scene was quite strong and may have represented a core element in his dynamics.

With some variations, this same theme was repeated during sessions 7 and 8.

Session 9. This scene centered around the hypothesized cues of conflict, frustration, rejection, abandonment, punishment and physical discomfort as an infant (standard anal, oral and oedipal scenes). These did not elicit a great deal of anxiety and it was hypothesized that Mr. R's present conditioned fears were probably not associated with ~~that was~~ experienced ~~much~~ before the age of 12.

Session 10. Since it could be hypothesized that the patient's inadequacy feelings and fear of masculine authority might be based on his concern that he did not measure up to acceptable standards of masculinity, this scene centered around homosexual cues. Mr. R. responded with little or no anxiety to this theme, ~~however~~, so it was not pursued further.

Session 11. Since the patient was about to become a father and there were some indications that this stress was one of the factors which brought him into the hospital, a theme in which he lost control of his anger toward the child (e.g. his taking his own father's role and the child taking his role) was constructed. The patient responded with considerable affect.

Session 12. This scene again centered around the same cues presented in Scene 11, but also included the anger he felt towards his wife, as a consequence of rejecting him in favor of the child.

By the end of therapy the tremors had dissipated considerably. They disappeared entirely within approximately two months after the last session. Also, as shown in Fig. 1, the patient's MMPI profile, which before therapy had peaked at 90 T on both Scales 2 and 7, fell within normal limits four months after the last session. At that time Mr. R. informed the author that he could now actually enjoy movies with violence in them. He also reported that arguments with his wife and boss were not nearly so stressful as they had been before therapy. No recurrence of tremors or seizure-like episodes were reported at that time.

- Discussion -

Obviously, developing and presenting hypothesized cues to the first subject would have been unnecessary. On the other hand the

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second subject responded well to the hypothesized cues. While there is some evidence that exposure to hypothesized cues leads to extinction of the conditioned emotional response (Prochaska, 1971), the decision to include the hypothesized cues when using the flooding technique should probably remain a clinical one, based on the client's response to therapy.

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Footnotes

1. Requests for reprints may be submitted to Patrick A. Boudewyns, Research Service, Veterans Administration Hospital, Iowa City, Iowa 52240.
2. It should be emphasized that Implosive Therapy (IT) or Implosion should not be considered synonymous with flooding. Flooding is a general term which may be defined as the therapeutic process of manipulating the situational and therapeutic demand such that the patient will be inclined to repeatedly experience, either in imagination or in vivo, those objectively non-punishing cues that produce a conditioned emotional response (CER) until, presumably through extinction, the CER is no longer produced by that cue. IT, on the other hand, is that specific flooding procedure originated by Thomas Stampfl and described in Stampfl and Levis (1967).

Fig. 1

Mr. R's MMPI profiles. Tests were administered before therapy (solid line) and at 4 months follow-up (broken line).

